

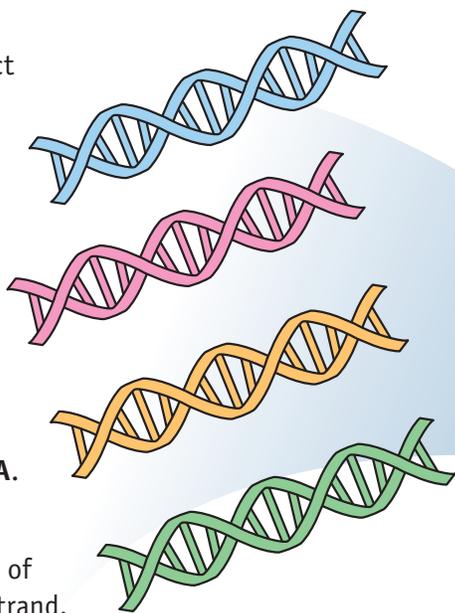
Genetically Engineered Animals



1

Generation of the DNA Construct

- A. Milk Protein Promoter DNA:** Allows for expression only in goat mammary glands.
- B. Therapeutic Protein Gene:** Encodes a protein known to treat disease in people.
- C. Terminator Sequence:** Assures that only the gene of interest is controlled by **A**.
- D. Other DNA Sequences:** Helps with the introduction of the new combination DNA strand.



New traits can be introduced into animals. Here's how it works for animals engineered to produce a human pharmaceutical.

2

The DNA construct is created by combining **A, B, C and D**.

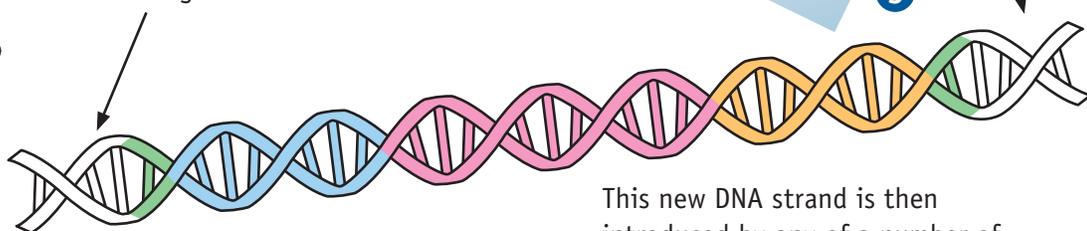


6

The drug to be used to treat human disease is purified from the goat's milk.



Native goat DNA



3

This new DNA strand is then introduced by any of a number of methods into an animal cell, such as an egg, that is then used to produce a genetically engineered animal.

5

The offspring of the first genetically engineered goats, referred to as production animals, are milked. The milk is transferred to a purification facility.



4

The first genetically engineered goat is produced.

